

REMARKS/ARGUMENTS

In view of the foregoing amendment and following remarks, favorable reconsideration is respectfully requested. As discussed in greater detail below, Claims 1 and 15 have been amended to recite that the composition is obtained by adding acid to the recited silicate or organosilicate compounds. Support for this amendment can be found, for example, on page 19, lines 19 – 21.

Claims 1 – 4 and 15 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Watanabe. Claim 5 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Watanabe and Nishiyama, and Claims 13 and 14 have been rejected as being unpatentable over the combination of Watanabe and Mandal. In all rejections, Watanabe is the primary reference relied on by the Examiner and will be specifically discussed.

As discussed in Applicants' previous response, Watanabe teaches a four step process (steps a- d) in which a dehydration-condensation reaction is performed in the presence of a neutral to basic solution. In step c, the solution prepared in step b is mixed with an alkali metal hydroxide, water-soluble organic base or water-soluble silicate such that the pH becomes 7 to 11. See column 4 lines 60 -64 and column 9, lines 7 – 18. Thereafter, the now neutral to basic solution prepared in step c is heated to effect dehydration-condensation of the silicates. Thus, Watanabe describes performing a dehydration-condensation reaction under neutral to basic conditions.

To further clarify the claimed invention, Claims 1 and 15 have been amended to recite that the composition is obtained by adding acid to the recited silicate or organosilicate compounds. Watanabe does not disclose or suggest the step of adding an acid to the recited silicate or organosilicate to perform a dehydration-condensation reaction, or the advantages of performing the condensation reaction by adding an acid to the silicates. As discussed on page 10 of the present application, adding acid to the recited silicates offers several advantages that are not taught by the prior art. For example, the application states that when acid HY is added to silicate solution, the silicate compound is converted into silicic acid according to Equation 6.



Appl. No.: 10/808,692
Amdt. dated 05/15/2007
Reply to Office Action of 01/31/2007

When the acid is further added to lower the pH value, silicic acid is condensed to yield the condensation product in Equation 7. The resulting condensation product does not have the alkoxy group in the molecule, being different from the condensation product of a silane compound as a starting material. As a result, structural defects caused by the presence of an alkoxy do not appear, and consequently the mechanical strength of the resulting porous film is improved. See page 10, line 23 to page 11, line 13.

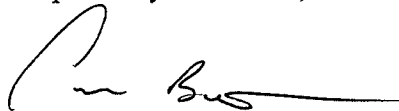
In contrast to the claimed invention, Watanabe teaches adding a base so that the pH becomes 7 to 11. Accordingly, Watanabe fails to disclose or suggest a condensation product that is obtained by adding an acid to the recited silicates or organosilicates, and therefore Watanabe fails to disclose or suggest the claimed invention. Similarly, neither Nishiyama nor Mandal disclose or suggest a condensation product that is obtained by adding an acid to the recited silicates or organosilicates. Thus, Claim 1 and any claims dependent thereon are patentable over Watanabe whether considered individually or in combination with Nishiyama and Mandal.

In view of the remarks made above, Applicant submits that the rejections under 35 U.S.C. § 102(e) and 103 have been overcome and that the pending claims are in condition for allowance.

Conclusion

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



Timothy J. Balts
Registration No. 51,429

Appl. No.: 10/808,692
Amdt. dated 05/15/2007
Reply to Office Action of 01/31/2007

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111
LEGAL02/30248795v1

ELECTRONICALLY FILED USING THE EFS-WEB ELECTRONIC FILING SYSTEM OF THE UNITED STATES PATENT & TRADEMARK OFFICE ON May 15, 2007.